

Notice of Allowability

Application No.

09/862,948

Examiner

Ramnandan Singh

Applicant(s)

LEVY, DAVID H.

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to March 19, 2007.
2. ☒ The allowed claim(s) is/are 34-39,55-68,71-74,76-79,91,92 and 95-110.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

1. This action is in response to applicant's response filed on March 19, 2007. **Claims 34-39, 55-68, 71-74, 76-79, 91-92, 95-110** are pending in the present application.

2. EXAMINER'S AMENDMENT/COMMENT

Applicant has agreed to the following amendment during his telephonic interview with the Examiner held on March 29, 2007:

In the claims:

Claims 1-20, 30-33, 40-54 and 85 are cancelled.

The Interview summary is enclosed.

REASONS FOR ALLOWANCE

3. The following is an examiner's statement of reasons for allowance:

This invention relates to keypads in which output keystrokes are determined from individual switch activation and from the combined activation of adjacent switches. Claim 55 identifies the uniquely distinct feature of the keypad comprising: an array of discrete snap elements extending between the cover and the substrate and spacing the cover from

the substrate, the snap elements each located between two adjacent independent key regions and adapted to resiliently collapse as a non-linear response to local pressure against the exposed cover surface to provide tactile feedback in response to pressure against both elevated key regions and non-elevated key regions, wherein the snap elements are arranged to provide a substantially equal tactile feedback in response to activating both elevated key regions and non-elevated key regions. As such, claim 55 requires arranging snap elements to provide a substantially equal tactile feedback in response to activating both elevated key regions and non-elevated key regions. While the closest prior art, Krishnan [US 6,377,685 B1, Fuhrmann et al [US 7,092,520 B2], and Philipp [US 6,535,200 B2] each teach a multi-purpose keypad key arrangement, Krishnan using a keypad key arrangement having a positive tactile feedback, Fuhrmann et al using snap-in-place releasable connection, and Philipp using a multi-electrode capacitive position sensor functions; none of the prior art teach or suggest arranging snap elements to provide a substantially equal tactile feedback in response to activating both elevated key regions and non-elevated key regions. As such, the prior art, either singularly or in combination, fail to anticipate or render the above underlined limitation obvious. Therefore,

claim 55 is indicated allowable. Claims 71 and 95 are essentially similar to claim 55 and are indicated allowable.

Claim 34 recite an electronic device and limitations for the following: "a flexible cover disposed above the substrate and carrying a second array of spaced apart, conductive trace elements, said first and second arrays together forming a coordinate system, the cover separated from the substrate by an array of resilient, collapsible elements and having an exposed, continuous surface; the first and second arrays of trace elements forming a capacitive grid responsive to presence of a digit of an operator on the surface of the cover." The prior art of record does not teach these limitations. Therefore, Claim 34 is indicated allowable.

Claim 76 recites a keypad and limitations for the following: "at least one continuous, elongated snap element extending adjacent at least three key regions of one row of key regions, between the cover and the substrate and spacing the cover from the substrate, the snap element adapted to resiliently collapse as a non-linear response to local pressure against the exposed cover surface to provide tactile feedback of keypad operation." The prior art of record does not teach these limitations. Therefore, Claim 76 is indicated allowable.

New search updates reveal no prior art that these teach these limitations in the context of the claims.

4. The claims have been re-numbered as follows:

CLAIMS NUMBER (ORIGINAL)	CLAIMS NUMBER (FINAL)
34-39	1-6
55-68	7-20
91-92	21-22
71-74	23-26
76-79	27-30
95-110	31-46

Claim no. 55 along with figure number 29 will be published in the Official Gazette.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramnandan Singh whose telephone number is (571) 272-7529. The examiner can normally be reached on M-TH (8:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on 571-272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ramnandan Singh
Examiner
Art Unit 2614

A handwritten signature in black ink, appearing to read 'R NPM', with a horizontal line underneath.